

Industry Curriculum Framework Information Package

Primary Industries

Current as at December 2005

Please ensure that this is the most current version of this document by referring to the online version at
https://detwww.det.nsw.edu.au/directorates/vet_schools/vet-in-Schools/frameworks.html

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This section must be read in conjunction with the:

- Board of Studies Primary Industries Syllabus (Parts A & B)
- Board of Studies ACE Manual
- Workplace Learning Handbook

The following information is provided for the Primary Industries industry curriculum framework:

- Teacher training requirements
- Assessor qualifications
- Using qualified assessors
- Resource/equipment requirements
- Quality assurance requirements

Checklists

1. Teacher qualifications
2. Student work placement
3. Student assessment
4. Resources/equipment

Animal Care and Ethics

The treatment and care of all animals in NSW is governed by the *Prevention of Cruelty to Animals Act 1979* (NSW), often referred to as POCTAA. This legislation is applicable to all people in NSW at all times and includes descriptions of the legal ages for some animal husbandry practices for particular species.

In addition to POCTAA, animals used for teaching and research are protected by the *Animal Research Act 1985* (NSW) and the Animal Research Regulation 1995 (NSW). The Regulation incorporates the Australian code of practice for the care and use of animals for scientific purposes. These pieces of legislation aim to protect the welfare of vertebrate animals used in teaching and research by ensuring that their use is justified, humane and considerate of the animals' needs.

The Animal Research Act makes it illegal for any animal to be used for teaching without prior approval of an Animal Ethics Committee. The Schools Animal Care and Ethics Committee (SACEC) has been established by and is accountable to the Department of Education and Training, the Catholic Education Commission and the Association of Independent Schools of NSW on behalf of their participating schools, for monitoring the use of animals for teaching and research purposes in their schools.

The SACEC has produced the document *Animals in schools: Animal welfare guidelines for teachers* that provides five categories of approved activities involving animals. These guidelines specify who can use the animal and in what way, so that the welfare of the animal is protected.

Categories 1–3 activities may be carried out by students and teachers with the justification that they allow students to meet educational outcomes.

Categories 4 and 5 activities may be undertaken by students only if prior written approval from the SACEC has been obtained.

Before demonstrating to students a category 5 activity, the teacher must have written certification from the SACEC (a three-year certification).

Animals in schools: Animal welfare guidelines for teachers also contains a list of activities that are not permitted to be carried out by teachers or students, in the context of educational programs associated with the school, under any circumstances.

Similarly, TAFE NSW have guidelines that describe categories of activities and procedures for animal use within TAFE institutes. These can be accessed through the TAFE website (www.tafe.nsw.edu.au).

Procedures approved by NSW Agriculture for the use of animals in teaching, research and extension are available in the publication *Animal Care*, and are available through the NSW Agriculture website (www.agric.nsw.au).

Teacher training requirements

a) Agriculture and Rural Operations Delivery

Qualification benchmark

A teaching qualification in:

Agricultural Science.

Eligibility to deliver mandatory units of competency and elective units of competency in the Agriculture and Rural Operations pathways is achieved on:

recognition of individual qualifications, industry experience or other training (RPL).

and/or

satisfactory completion of the **approved training program**.

Approved training program – Primary Industries (Agriculture and Rural Operations)

APPROVED TEACHER TRAINING PROGRAM	DURATION
Orientation Curriculum framework/syllabus orientation, competency based teaching and assessment, facilitating workplace learning. First Aid Training Program	2 days 1 day
Industry specific training Part 1: Farm Chemical training (level 3) Farm Tractor Safety Instructor training Part 2: Integrated on-farm program including crop, livestock & fencing activities. Assessment is integrated into training. Production Horticulture	2 days 2 days 3 days 2 days
Certificate IV in Assessment and Workplace Training	Flexible

b) Amenity Horticulture Delivery

Qualification benchmark

Teachers with relevant qualifications and experience in Amenity Horticulture can nominate for training. A degree in Agricultural Science is desirable but not essential.

Eligibility to deliver amenity horticulture units of competency and designated units of competency in the Agriculture and Rural Operations pathways is achieved on:

recognition of individual qualifications, industry experience or other training (RPL).

and/or

satisfactory completion of the **approved training program**.

Approved training program – Primary Industries (Amenity Horticulture)

APPROVED TEACHER TRAINING PROGRAM	DURATION
Orientation Curriculum framework/syllabus orientation, competency based teaching and assessment, facilitating workplace learning. First Aid Training Program	2 days 1 day
Industry specific training Part 1: Introduction to amenity Horticulture and assessment structure Part 2: Integrated amenity horticulture activities. Assessment is integrated into training. Training sessions will be spaced to enable assignment work to be completed	3 days 3 days
Certificate IV in Assessment and Workplace Training	Flexible

c) Conservation and Land Management

Qualification benchmark

Teachers with relevant qualifications and experience in Conservation and Land Management can nominate for training. A degree in Agricultural Science is desirable but not essential.

Eligibility to deliver conservation and land management units of competency and designated units of competency in the Agriculture and Rural Operations pathways is achieved on:

recognition of individual qualifications, industry experience or other training (RPL).

and/or

satisfactory completion of the **approved training program**.

Approved training program – Primary Industries (Conservation and Land Management)

APPROVED TEACHER TRAINING PROGRAM	DURATION
Orientation Curriculum framework/syllabus orientation, competency based teaching and assessment, facilitating workplace learning. First Aid Training Program	2 days 1 day
Industry specific training Part 1: Integrated delivery and assessment for the recognition of skills in Conservation and Land Management. Part 2: Advanced program of integrated delivery and assessment for the recognition of skills in Conservation and Land Management.	5 days 5 days
Certificate IV in Assessment and Workplace Training	Flexible

Eligibility to deliver mandatory and elective units of competency

Teachers completing the Agriculture and Rural Operations training program are eligible to deliver and assess the following units of competency:

Mandatory Units	
RTC2209A	Install, maintain and repair fencing
RTC2401A	Treat weeds
RTC2701A	Follow OHS Procedures
RTC2702A	Observe environmental work practices
RTC2704A	Provide basic first aid
RTC2705A	Work effectively in the industry
RTC2706A	Apply chemicals under supervision
RTC2801A	Participate in workplace communications
RTE2503A	Observe and report on weather
Elective units	
General	
RTC2301A	Undertake operational maintenance of machinery
RTC2307A	Operate machinery and equipment
RTC2309A	Operate tractors
RTD2202A	Conduct erosion and sediment control activities
RTD2313A	Clean machinery of plant, animal and soil material
RTD2803A	Observe and report plants and/or animals
RTE2201A	Carry out basic electric fencing operations
RTE2308A	Operate ride-on vehicles
RTE2902A	Collect and record production data
Livestock	
RTE2110A	Maintain livestock water supplies
RTE2113A	Monitor livestock to parturition
RTE2114A	Monitor water supplies
RTE2115A	Muster and move livestock
RTE2117A	Pen sheep
RTE2118A	Handle livestock using basic techniques
RTE2128A	Provide feed for livestock
RTE2134A	Assist with feeding in an intensive production system
RTE2136A	Load and unload livestock
RTE2144A	Carry out regular livestock observation
RTE2216A	Assist in preparing for shearing and crutching
RTE3133A	Prepare livestock for competition
Plants	

RTC2012A	Plant trees and shrubs
RTC2016A	Recognise plants
RTC2026A	Undertake propagation activities
RTC2404A	Treat plant pests, diseases and disorders
RTD2004A	Collect, prepare and preserve plant specimens
RTF2013A	Pot-on plants
RTF2014A	Prepare and maintain plant displays
RTF2017A	Prune shrubs and small trees
RTF2024A	Tend nursery plants
RTF2025A	Transplant small trees
RTF2504A	Determine basic properties of soil/growing media
RTE2010A	Establish horticultural crops
RTE2011A	Assist agricultural crop establishment
RTE2021A	Support horticultural crop harvesting
RTE2029A	Assist agricultural crop maintenance
RTE2030A	Assist agricultural crop harvesting

Completion of the approved training program does not enable teachers to deliver units from the Primary Industries Specialisation Study or Primary Industries Extension.

The training programs for Horticulture and Conservation and Land Management are currently under development. Once the programs have been finalised, the units of competency able to be delivered will be included in this document.

Qualifications and industry experience

Teachers who have recent and relevant industry qualifications or experience may seek entry to, or exemption from, some components of training or may seek eligibility to teach additional units of competency through recognition of prior learning (RPL). **All teachers are required to complete an orientation program.**

RPL is based on teachers' industry knowledge/experience and or formal qualifications relating to the unit(s) for which they are seeking accreditation.

The RPL application requires teachers to outline their industry experience/knowledge and any qualifications they hold pertaining to the unit of competency for which recognition is being sought. All RPL applications must be substantiated with appropriate evidence.

The RPL application form is available from school sector vocational education consultants or can be downloaded from General section of the GoVET website www.govet.nsw.edu.au

Maintaining industry currency

The requirement for current knowledge is met initially through completion of the approved teacher training program. Thereafter it is the responsibility of individual teachers to maintain industry currency.

Teachers can maintain industry currency through:

- industry contact and liaison
- collegial networks with a professional development focus
- interaction with colleagues through the VET teachers website at www.govet.nsw.edu.au.

For further details teachers should contact their vocational education consultant.

Assessor qualifications

Consistent with VETAB requirements, the NSW Department of Education and Training, Catholic Education Commission and Association of Independent Schools require that all staff assessing industry training package qualifications hold a *Certificate IV in Assessment and Workplace Training*. Teachers can gain this qualification through an approved teacher training program or through a process of recognition.

Certificate IV Assessment and Workplace Training comprises eight units of competency:

- Train small groups (BSZ404A)
- Plan and promote a training program (BSZ405A)
- Plan a series of training sessions (BSZ406A)
- Deliver training sessions (BSZ407A)
- Review training (BSZ408A)
- Plan assessment (BSZ401A)
- Conduct assessment (BSZ402A)
- Review assessment (BSZ403A)

Secondary teachers who meet the VET teacher training requirements for this industry curriculum framework are granted recognition for five of the above eight units of competency based on their existing qualifications, skills and experience.

A trained VET teacher is required to demonstrate their competency in the remaining three units:

- Plan assessment (BSZ401A)
- Conduct assessment (BSZ402A)
- Review assessment (BSZ403A)

On successful completion of these units of competency, *Certificate IV in Assessment and Workplace Training* will be issued.

NB: Prospective VET teachers who already hold *Certificate IV in Assessment and Workplace Training* should send a copy to their vocational education consultant as evidence of the qualification.

Resources/equipment requirements

Schools delivering units of competency in the Primary Industries framework must have access to specific resources/equipment. Students must have sufficient access to the specified resources/equipment to enable them to acquire and demonstrate competency. The following resources/equipment are required to deliver and assess the units of competency. Resources/equipment may be accessible either on-site (at school) or off-site (including the work placement).

This document has been developed in accordance with the requirements of the relevant training packages, and should be read in conjunction with the NSW Board of Studies Primary Industries industry curriculum framework Syllabus Part B.

MANDATORY UNITS

RTC 2209A – Install, maintain and repair fencing	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Post-hole borer • Post-hole shovel • Star picket driver • Wire strainers • Fencing pliers • Wire cutters • Shovel • Crowbar/rammer • Drill • Spirit level • Appropriate PPE 	CONSUMABLES/MATERIALS It is recommended to reuse materials where possible. <ul style="list-style-type: none"> • Strainer posts • Stays • Droppers • Star pickets. • Plain wire • Barbed wire • Ring lock wire • Netting wire • Hinge joint • Wire vice • Gripples • Wire ties • Staples.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable for the erection of varying types of rural fencing • Suitable for the use and demonstration of fencing tools and equipment • Storage facility for a range of fencing tools, equipment and materials 	

RTC2401A – Treat weeds	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • First Aid Kit • Communication devices • Chemical application equipment • Cultivation equipment • Chemical labels and MSDS • Appropriate PPE • Records including: <ul style="list-style-type: none"> - weed treatment records - weed inventory 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Weed treatments • First Aid Kit Contents
SITE REQUIREMENTS <ul style="list-style-type: none"> • Storage facility for weed treatments • Storage facility for application equipment • Suitable site for treating weeds 	

RTC2701A – Follow OH&S procedures	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • OHS regulations • First Aid Kit • Appropriate PPE • Records • Signs and symbols • WorkCover website • Communication devices • Training manuals 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • First Aid Kit contents • Drinking water
SITE REQUIREMENTS Worksites must comply with enterprise OH&S requirements.	

RTC2702A – Observe environmental work practices	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Relevant sources of information: <ul style="list-style-type: none"> - journals, magazines - trade publications - newspapers - internet • Environmental records • Relevant legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Risk assessment surveys
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate to training. 	

RTC2704A – Provide basic first aid	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • First Aid Kit • Resuscitation manikins • First Aid Manuals • Workplace documentation regarding emergency procedures, including policies and manuals regarding provision of first aid • Documentation for reporting and recording incidents including: accident report form; Work Cover incident form: first aid register 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Disposable face shields • Mannikin cleaning agents • Roller bandages • Dressings – assorted • First Aid Kit contents
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate to training 	

RTC2705A – Work effectively in the industry	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Sources of information <ul style="list-style-type: none"> - industry journals - reference books - publications - internet/websites eg industry associations, government agencies • Sector specific promotional material • Work management tools <ul style="list-style-type: none"> - calendars/diaries - rosters - work schedules - relevant Standard Operating Procedures (SOP) - telephone, email • Relevant legislation • Documentation for reporting complaints, grievances, disciplinary issues 	CONSUMABLES/MATERIALS
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to industry workplaces. 	

RTC2706A – Apply chemicals under supervision	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Application tools & equipment • Chemical inventory • Chemical labels/MSDS • Relevant legislation • Safety signs • Range of application equipment • Appropriate PPE • Measurement equipment • Chemical records • Information re disposal procedures 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Chemicals • Risk assessment surveys
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate chemical storage • Appropriate tool and equipment storage 	

RTC2801A – Participate in workplace communications	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Spoken communication equipment: <ul style="list-style-type: none"> - telephone - answering machine - two-way radio • Written workplace notices, posters etc • Remote modes of communication including: <ul style="list-style-type: none"> - storage facilities for hard copy and electronic communications - e-mail - facsimile - paging system • Organisational/flow charts indicating communication protocols 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Workplace forms relating to conditions of employment including: <ul style="list-style-type: none"> - personnel forms - work rosters - time sheets
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to workplace 	

RTE2503A – Observe and report on weather	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Sources of regular updates including: <ul style="list-style-type: none"> - weather maps - radio - television - the internet - telephone • Examples of weather and climate information including: <ul style="list-style-type: none"> - reports - warnings - data collected from property weather station - grazier alerts - Bureau of Meteorology 	CONSUMABLES/MATERIALS
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to weather station • Access to suitable shelter environments. 	

ELECTIVE UNITS

General

RTC2210A – Maintain properties and structures	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Hand / small power tools • Cutting tools • Measuring equipment • Concrete tools & equipment • Relevant Standard Operating Procedures (SOP) • Building codes • Product labels/MSDS • Appropriate documentation • Appropriate PPE 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Paints / Stains • Corrugated iron • Weatherboards • Glass • Shade cloth • Plastic • Cement sheeting • Risk assessment surveys
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable structure, facility, infrastructure or resource requiring maintenance. 	

RTC2301A – Undertake operational maintenance of machinery	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Hand tools • Lubrication tools • Pneumatic tools • Electric tools • Hydraulic tools • First Aid Kit • Machinery • Documentation. • Appropriate PPE • Manufacturers' handbooks 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Spare parts • Lubricants • Coolant • Petrol/diesel • First Aid Kit contents.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to machinery • Storage for tools and equipment 	

RTC2307A – Operate machinery and equipment	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Suitable machinery and equipment • Appropriate PPE • Operational and information manuals for enterprise machinery and equipment • OH&S signage • Work plans 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Log books • Pre start checklists • Fault documentation • Fault tags • Repair job cards.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate storage facilities for equipment and machinery. 	

RTC2309A – Operate tractors	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Range of personal protective equipment (PPE) • Tractors and a variety of equipment • Equipment for cleaning and decontaminating, securing and stowing of tractor following use according to: <ul style="list-style-type: none"> - manufacturer's instructions - enterprise policy and SOP - OH&S guidelines - reporting documents • Operational schedules and records eg <ul style="list-style-type: none"> - routine checks and maintenance - scheduled maintenance activities - faults and malfunctions - mandatory or statutory inspections - log books • Attached equipment • Operators manual. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Fuel
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to suitable site for tractor operation. 	

RTD2202A – Conduct erosion and sediment control activities	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Relevant legislation documents and tables including: <ul style="list-style-type: none"> - Protection of the Environment Operations Act 1997 (NSW) - Landcare • Records to note breach activities including: <ul style="list-style-type: none"> - diary notes - letters - cameras - photographs and appropriate storage - reports • Local council requirements 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Photo film
SITE REQUIREMENTS <ul style="list-style-type: none"> • Area at risk of erosion. 	

RTD2313A - Clean machinery of plant, animal and soil material	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Tools used to assist in cleaning process including: <ul style="list-style-type: none"> - wheel chocks • spanners • screwdrivers • sockets and wrenches • hammers • torch • probes • endoscopes • rods • mirrors • Cleaning equipment including: <ul style="list-style-type: none"> - high pressure water cleaner - air compressor - vacuum - brooms and brushes • Relevant legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Cleaning records including: <ul style="list-style-type: none"> - checklists • quality assurance requirements • regulatory forms • audit reports
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitably equipped vehicle storage compound/work facility. • Suitable disposal area 	

RTD2803A - Observe and report plants and / or animals	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Equipment required for observation of plants: <ul style="list-style-type: none"> camera hand-held magnifying glass plant identification books field note book Access to legislation Equipment required for recording data including: <ul style="list-style-type: none"> field note books field record sheets electronic databases sound records spreadsheets/databases/tables/graphs/maps/drawings 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Film Plastic bags
SITE REQUIREMENTS <ul style="list-style-type: none"> Access to suitable site for observation. 	

RTE2201A - Carry out basic electric fencing operations	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Post driver/borer Wire strainers Fencing pliers/cutters Wire spinners Shovel/crowbar/rammer Brace and bit/drill Energiser Earth stakes Cut out switches Gate switch Lightning diverter Testing equipment Appropriate PPE 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Wire including: <ul style="list-style-type: none"> Live Earth Electric ribbon tape Tagging items Insulators Earth pins
SITE REQUIREMENTS <ul style="list-style-type: none"> Area to fence Access to electricity – includes solar 	

RTE2308A - Operate ride-on vehicles	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Appropriate range of ride-on vehicles <ul style="list-style-type: none"> 2 wheel 3 and 4 wheel motorcycles (all-terrain capability) ride-on mowers. Manufacturers specifications for pre-start and safety checks Serviced maintenance Suitable mounted/attached equipment Standard Operating Procedures and enterprise requirements. Appropriate PPE 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Materials for identifying and reporting faults and malfunctions. Manufacturers' specifications for: <ul style="list-style-type: none"> pre-start & safety service and maintenance Log books
SITE REQUIREMENTS <ul style="list-style-type: none"> Suitable site for storing and operating ride-on vehicles. 	

RTE2603A – Lay irrigation and/or drainage pipes	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Types of irrigation pipe including: <ul style="list-style-type: none"> polythene PVC Types of drainage pipe including: <ul style="list-style-type: none"> agricultural drainage pipe slotted PVC Tools required for underground irrigation and drainage pipe installation including: <ul style="list-style-type: none"> spirit level water level string lines shovels spades rakes picks pegs hacksaw Other equipment including: <ul style="list-style-type: none"> automatic level laser level trencher polythene pipe layer roller vibrating plate Appropriate PPE Drawings and plans Equipment for trench location and marking including: <ul style="list-style-type: none"> measuring tapes pegs string lines spirit levels Tools for levelling and consolidating bedding material including: <ul style="list-style-type: none"> hand tools screed rollers vibrating plates Cleaning equipment 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Bedding materials including: <ul style="list-style-type: none"> crusher dust coarse sand Range of pipe fittings including: <ul style="list-style-type: none"> couplings unions tees gate valves saddles reducers elbows caps flow meters remotely controlled valves low voltage electrical cable Fitting types including: <ul style="list-style-type: none"> O-ring coupling screw thread glued joint Materials for backfilling of drainage pipes including: <ul style="list-style-type: none"> coarse aggregate to facilitate drainage geo-textile material to prevent silt and clay from blocking the drainage pipes.
SITE REQUIREMENTS <ul style="list-style-type: none"> Irrigation / drainage site. Safe storage and handling site	

RTE2804A – Provide information on products and services	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Range of product / service information relevant to enterprise in print, audiovisual or multimedia formats as appropriate to enterprise Exhibition / display items appropriate to range of products and services offered by typical industry enterprises. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Information sheets, printouts etc Samples
SITE REQUIREMENTS <ul style="list-style-type: none"> Access to workplace / display environments / field days etc. 	

RTE2902A - Collect and record production data	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Appropriate PPE • Data logger • Barcode scan • Computers / software • Cameras • Scales • Enterprise diary • Barriers as required. • Data storage equipment. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Paper • Forms • Data drives
SITE REQUIREMENTS <ul style="list-style-type: none"> • Quarantine area • Appropriate signage. 	

ELECTIVE UNITS

Livestock

RTE1105A – Undertake basic shearing and crutching	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Shearing equipment including: <ul style="list-style-type: none"> - access to shearing sheds - shearing equipment including handpieces - down tubes - overhead gear - combs and cutters • PPE including <ul style="list-style-type: none"> - Shearing harness - Back support braces - Safety glasses • Access to shearing industry OH&S conditions and codes of work practice in documents such as: <ul style="list-style-type: none"> - NSW Pastoral Industry Award (1998) - National Code of Practice for the Shearing Industry, 1997 (AWU National Health and Safety Unit) - Health and safety at work shearing guide, 2002 (Work Cover NSW) - Animal welfare legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Lubricants • Sheep • Risk assessment surveys
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to working shearing shed. 	

RTE2110A - Maintain livestock water supplies	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Appropriate PPE • Hand tools • Vices • Stillson • 2 way radio • Power sources/engines • Maintenance plans • Log book or notice board • Testing equipment 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Thread tape • PVC glues/solvents • Machinery spare parts • Cleaning supplies • Joiners / connectors • Valves • Taps • Lubricants / fluids
SITE REQUIREMENTS <ul style="list-style-type: none"> • Watering sites • Service/storage sites for equipment. 	

RTE2113A – Monitor livestock to parturition	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Appropriate PPE • Animal records • Suitable fencing • Animal handling equipment • Feed and water troughs • Animal management tools & equipment including: <ul style="list-style-type: none"> - Drench guns - Ear tag pliers - First aid kit - Feed plans - Animal welfare legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Veterinary products including: <ul style="list-style-type: none"> - Vaccines - Drenches - Blowfly control. • Animal feed. • Identification tags.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Safe and secure environment for animals including paddocks and yards. 	
RTE2114A - Monitor water supplies	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Equipment for assessing water quality eg <ul style="list-style-type: none"> - hand-held PH/ conductivity meters - water filters - water pumps - measuring devices • Reporting methods 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Disposable filters • Pump parts • Water treatment
SITE REQUIREMENTS <ul style="list-style-type: none"> • Site with water storage facilities. 	
RTE2115A – Muster and move livestock	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Appropriate PPE • Transport modes including: <ul style="list-style-type: none"> - Motorbike - Utilities & vehicles - Horses - Trailers • Additional information including: <ul style="list-style-type: none"> - Timetables - Road maps - Property plans • Reporting methods 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Fuel
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable area to muster animals to and from. 	
RTE2117A - Pen sheep	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Trained dogs • Appropriate PPE • Industry awards • Appropriate legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Sheep
SITE REQUIREMENTS <ul style="list-style-type: none"> • Working shearing shed and yards. 	

RTE2118A - Handle livestock using basic techniques	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Handling equipment • Range of associated equipment including: <ul style="list-style-type: none"> - crush/bail or crutching cradles - mulesing and marking cradles - jetting, drenching and dipping equipment - gates - pens - races - loading ramps - leg ropes - scales - foot baths - feet trimming equipment • Appropriate PPE • Working dogs as required • Appropriate legislation 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Stock identification equipment including: <ul style="list-style-type: none"> - tags (ear, tail and collar) - raddle - sprays - silicon chip implants - tattoos - freeze and paint branding - leg bands - computerised collars/anklets - colour, breed and sex
SITE REQUIREMENTS <ul style="list-style-type: none"> • Working shearing shed and yards • Cattle yards 	

RTE2124A – Carry out birthing duties	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • birthing equipment • calving chains • ropes, restrainers • knives • scales • information sources <ul style="list-style-type: none"> - Department of Agriculture - breed associations - enterprise records 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • teats and bottles • ear tags • temporary collars • marking paint • lubricating gel • antiseptic • examination gloves • suturing material
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate birthing locations 	

RTE2128A - Provide feed for livestock	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Weighing scales • Feed and work plan • PPE 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • animal feed including: <ul style="list-style-type: none"> - Supplements - Roughage - Grains • water
SITE REQUIREMENTS <ul style="list-style-type: none"> • Animal feed storage area • Appropriate feeding site. 	

RTE2134A - Assist with feeding in an intensive production system	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Safety Data Sheets • Feeding machinery and equipment • PPE • Documentary records of feed use and volumes 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Feed items eg grains, meats, pelleted and liquid foods.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Animal feed storage area. 	

RTE2136A - Load and unload livestock	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Facilities and equipment associated with loading and unloading livestock including: <ul style="list-style-type: none"> yards scales pens fixed and portable loading ramps cages prods pigboards visual stimulus dogs Appropriate PPE Identification records. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Animal health treatments Animal feed Water
SITE REQUIREMENTS <ul style="list-style-type: none"> Suitable area for loading and unloading animals eg yards and ramp. 	
RTE2144A - Carry out regular livestock observation	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Appropriate PPE Livestock restraint equipment including: <ul style="list-style-type: none"> cradles leg rope Common treatment equipment: <ul style="list-style-type: none"> drenching disinfecting area of injury removal of foreign object hoof trimming 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Cleaners / disinfectants
SITE REQUIREMENTS <ul style="list-style-type: none"> Restraint sites eg bails, crushes. 	
RTE2216A - Assist in preparing for shearing and crutching	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> Catching pens PPE Shearing shed facilities consistent with current industry codes of practice including: <ul style="list-style-type: none"> National Code of Practice for the Shearing Industry 1997 (Australian Workers Union National Health and Safety Unit) Health and safety at work shearing guide 2002 (WorkCover NSW) Brooms Board scrapers/paddles Fleece bins Rubbish bins Press Wool table Trolley First aid kit 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> Wool packs Cleaning agents Stencils & ink Bale hooks and fasteners Non contaminating branding fluid First aid supplies
SITE REQUIREMENTS <ul style="list-style-type: none"> A working shearing shed and yards. 	

RTE3133A - Prepare livestock for competition	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Feed records • Handling and grooming equipment including: <ul style="list-style-type: none"> - nose rings - halters - canes - ropes - leads - combs - vacuums - brushes - driers - clippers - external preparations - oral supplements - restraining devices 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Range of feeds available: <ul style="list-style-type: none"> - pasture (grasses and legumes) - grains (cereal and pulse) - fodder crops - silage - hay
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitably equipped environment eg pens, sheds, paddocks, troughs, handling areas. 	

ELECTIVE UNITS

Plants

RTC2012A - Plant trees and shrubs	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • secateurs • tree frames • shovel/spade • trowel • knives • forks • hoes • buckets • stabilising equipment • wheelbarrow • rakes • stakes and pegs • rubbish bins • dibbler stick • hoses, fittings and watering cans • Enterprise work procedures and records • PPE. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Recording forms for workplace records • Water • Weed control chemicals • Fertiliser • Soil conditioners • Mulch • Tree guards • Young trees or shrubs.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Site for planting trees and shrubs • Tools equipment and material storage area. 	

RTC2016A - Recognise plants	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Equipment to assist the process of recognition of plant species including: <ul style="list-style-type: none"> - hand lens - camera - secateurs - specimen storage and transport equipment - field guides - literature searches - specimen collections • Written descriptions of plant species using appropriate terminology including: <ul style="list-style-type: none"> - common and botanical name - details of occurrence or origin - description of visible characteristics - climate and location requirements - growth requirements - specific handling requirements 	CONSUMABLES/MATERIALS
SITE REQUIREMENTS <ul style="list-style-type: none"> • Library • plant suppliers • growing environments. 	

RTC2026A - Undertake propagation activities	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • secateurs • knives for trimming leaves • pots, trays, tubes • hormone powder • media components • bins • trailers • wheelbarrow • trolley • shovel/trowels • plant supports, ties and labels • pot scourer • permanent marker • rubbish bins • dibbler stick • water spray container • hoses and watering cans • Records of operation • PPE • Irrigation. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Pre-treatments including: <ul style="list-style-type: none"> - Hormones - Fungicides • Fertilisers • Growing medium • Labels • Water
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate to training. 	

RTC2404A - Treat plant pests, diseases and disorders	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Pest, disease or disorder records • Equipment for different types of treatment and control methods including: <ul style="list-style-type: none"> - Mechanical - hoeing - chemical - appropriate PPE - backpack sprayers - spray tanks - fertiliser spreaders - boom sprays - rippers - pesticide applicators - handsaws • Treatment records and information • PPE • Affected plant materials. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Treatments including: <ul style="list-style-type: none"> - Fertilisers - Foliar nutrients - Insecticides - Fungicides - Dips - Baits - Hormones.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate to training. 	

RTD2004A - Collect, prepare and preserve plant specimens	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Range of collection equipment such as: <ul style="list-style-type: none"> - camera - secateurs 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Paper bags • Film • Tags • Notepaper • Pens/pencils • Herbarium sheets • Newspaper/pressing materials.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate to training. 	

RTF2013A - Pot-on plants	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Tools & equipment including: <ul style="list-style-type: none"> - potting machine - secateurs - knives for trimming leaves and roots - pots and containers - media components - bins - trailers - wheelbarrow - trolley - shovel/trowels - plant supports and ties - rubbish bins - dibbler stick - water spray container - hoses and watering cans - mixing tools • Measuring tools including: <ul style="list-style-type: none"> - scales - volumetric containers - product units • Range of watering systems including: <ul style="list-style-type: none"> - drip irrigation - overheads - watering cans - hoses 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • sand • topsoil • gravel • gro-wool • sawdust • pine bark • perlite • vermiculite • foam • peat • nutrient • ameliorants • ash • rice hulls • sphagnum moss • commercial mixes
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable sheltered workspace. 	

RTF2014A - Prepare and maintain plant displays	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Hand tools including: <ul style="list-style-type: none"> - shovel - spades - hoe - rakes - wheelbarrow - hoses - trolley - measuring tape - string - spray can markers - spirit level - pots - broom - hammer - secateurs • Appropriate PPE • Planting plans • Observation records • Signage & barriers. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Plants/shrubs • Fertilisers • Baskets/pots • Accessories including: <ul style="list-style-type: none"> - Sculptures - Rocks - Garden furniture - Decorative materials • Water
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable display area or garden bed. 	

RTF2017A - Prune shrubs and small trees	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Pruning tools and equipment: <ul style="list-style-type: none"> - Ropes - Handsaws - Hydraulic secateurs - Battery-powered secateurs - Pneumatic snips and compressor - Hedge trimmers - Chippers - Long-handled shears - Small ladder - Long poles to hold long-handled shears - Sealant (to protect branch cuts from microbial infection) • Documentation for horticultural pruning principles and practices including: <ul style="list-style-type: none"> - Written instructions - Pruning program - Enterprise SOP - Industry standards information - OHS procedures - Records of operation - Access to enterprise databases and spreadsheets, inventory, logbooks etc. 	CONSUMABLES/MATERIALS
SITE REQUIREMENTS <ul style="list-style-type: none"> • Access to suitable shrubs, small trees. 	

RTF2024A - Tend nursery plants	
TOOLS, EQUIPMENT & RESOURCES <ul style="list-style-type: none"> • Appropriate PPE • Tools and equipment including: <ul style="list-style-type: none"> - secateurs - knives for trimming leaves and roots - pots, planter bags and trays - media components - bins - trailers - wheelbarrow - trolley - shovel/trowels - plant supports and ties - dibbler stick for transplanting seedlings and small plants - hoses and watering cans • Disposal and recycling equipment • Chemical labels & MSDS. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Irrigation system components including: <ul style="list-style-type: none"> - pumps - lines - pipes - sprinklers - sprinkler heads - solenoids - filters - controllers - sprayers - drippers - disinfectant • Treatments including: <ul style="list-style-type: none"> - pesticides - fungicides - fertiliser - mulch • Water
SITE REQUIREMENTS <ul style="list-style-type: none"> • Irrigation system • Suitable nursery environment. 	

RTF2025A - Transplant small trees	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Appropriate PPE • First Aid Kit • Ropes • Secateurs • Jacks • Tree frames • Trailers • Wheelbarrows • Rakes • Shovel/trowels • Rubbish bins • Hoses, fittings and watering cans • Trolleys • Safety signs 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Media consumables • Ropes • Stakes and pegs • Conditioning additives: <ul style="list-style-type: none"> - Gypsum - Sand - Lime - Dolomite - Chemicals - Mulches
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable field and sheltered workspace environments. 	

RTF2504A - Determine basic properties of soil/growing media	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Sample collection tools & equipment including: <ul style="list-style-type: none"> - Spades - Augers - Field test kits - Interpretation charts • Appropriate PPE 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Soil testing materials • Collection bags • Soil/growing media.
SITE REQUIREMENTS <ul style="list-style-type: none"> • If testing soil – suitable collection sites. 	

RTE2010A - Establish horticultural crops	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Machinery equipment and tools <ul style="list-style-type: none"> - tractors - rotary hoes - bed formers - cultivators - fertiliser spreaders - surveying and measuring equipment - direct seeding and transplanting machinery - irrigation equipment - pesticide application equipment • Appropriate PPE • Crop protection items according to enterprise guidelines including: <ul style="list-style-type: none"> - wind protection - crop covers - artificial structures - shelter belts - trellises and stakes - mulch - plastic - frost protection - smudge pots 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Soil treatments/amendments including: <ul style="list-style-type: none"> - Gypsum - Organic matter - Artificial fertilisers • Planting materials Including: <ul style="list-style-type: none"> - Seeds - Seedlings - Runners - Cuttings - Bare rooted trees • Pre-plant treatments <ul style="list-style-type: none"> - Fungicide dips/dusts - Crown gall dips - Anti-transpirants • Plant treatments <ul style="list-style-type: none"> - Pest & disease prevention/control - Weed prevention/control • Fertilisers • Mulch • Water
SITE REQUIREMENTS <ul style="list-style-type: none"> • Suitable area to grow horticultural crops • Storage area for soil and plant treatments. 	

RTE2011A - Assist agricultural crop establishment	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Instructions about planting including: <ul style="list-style-type: none"> - Standard Operating Procedures (SOP) - enterprise policies and procedures - work notes - manufacturer's instructions - product information • A range of machinery, equipment and tools including: <ul style="list-style-type: none"> - tractors - land preparation machinery - seeding equipment and machinery - cultivators - fertiliser spreaders - field tool boxes - planting trailers • Appropriate PPE • Soil testing equipment: <ul style="list-style-type: none"> - pH - nutrient deficiencies and toxicities - soil structure - chemical fertility status including: <ul style="list-style-type: none"> - cation exchange capacity - nitrate - phosphate • Information on machinery operation • Planting materials. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Soil treatment items including: <ul style="list-style-type: none"> - Fertiliser - Gypsum - Lime - Organic products • Planting material equipment: <ul style="list-style-type: none"> - Treatments - Fungicides - Trimming items - Dips - Anti-transpirant
SITE REQUIREMENTS <ul style="list-style-type: none"> • Groupers • Fertiliser bins • Trucks/trailers • Augers • Bulk bags • Planting plans • Appropriate recording equipment and materials. 	

RTE2021A - Support horticultural crop harvesting	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Secateurs • Knives • Appropriate PPE • Maturity measurement tools including: <ul style="list-style-type: none"> - sizing rings - colour charts - refractometers - penetrometers - produce firmness testers - comparison charts • First Aid Kit • Transport methods and associated operators manuals. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Gloves • Water • First aid kit contents • Containers including: <ul style="list-style-type: none"> - boxes - trays - crates - bulk bins - net bags
SITE REQUIREMENTS <ul style="list-style-type: none"> • Storage area for tools and equipment. 	

RTE2029A - Assist agricultural crop maintenance	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Appropriate PPE • Tractors • Fertiliser spreaders • Spray rigs • Irrigation equipment. 	CONSUMABLES/MATERIALS <ul style="list-style-type: none"> • Fuel/oil /water/ grease • Chemicals including those for: <ul style="list-style-type: none"> - Weed control - Pest & disease control • Fertilisers • Workplace recording sheets.
SITE REQUIREMENTS <ul style="list-style-type: none"> • Appropriate area for an agricultural crop. 	

RTE2030A - Assist agricultural crop harvesting	
TOOLS & EQUIPMENT <ul style="list-style-type: none"> • Machinery, equipment and tools including: <ul style="list-style-type: none"> - harvesters - tractors - utilities - field bins - augers • Records including: <ul style="list-style-type: none"> - pre-start checklists - job cards - yields - crop harvested - date and time - areas harvested - observations made - machinery performance, observations or malfunctioning • Appropriate PPE. 	CONSUMABLES/MATERIALS
SITE REQUIREMENTS <ul style="list-style-type: none"> • Site containing suitable crop for harvest. 	

Quality assurance requirements

The implementation of HSC VET courses must be monitored to ensure compliance with the Australian Quality Training Framework (AQTF) and the Board of Studies HSC requirements.

The following checklists have been designed to assist schools in this process:

- teacher qualifications
- student work placement
- student assessment
- resources/equipment.

The checklists have been designed to be photocopied and completed by teachers implementing this framework. Checklists for resources/equipment must be completed for both core and elective strands. Principals should use these checklists to monitor the implementation of HSC VET courses to ensure compliance with AQTF and the Board of Studies HSC requirements.

It is the responsibility of the principal to complete the following forms and to forward them to the appropriate RTO/school sector senior representative:

- checklists for the Primary Industries industry curriculum framework to be delivered in that year
- Principal's Confirmation of Quality Assurance Requirements
- Monitoring Higher School Certificate Requirements (distributed to schools in February each year).

In addition, at the start of each year as part of the Board of Studies student entry requirements, schools are required to indicate via Schools On-line the qualification and units of competency intended for delivery in that calendar year. This requires the completion of the *competencies entered* component of the eBOS-VCS. At the end of each year schools are required to indicate via Schools On-line which units of competency have been successfully achieved by each student. This information will be used to generate an AQF Statement of Attainment or Certificate.